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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

CHEN, SOPHIA S

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,469

Applicant(s)

ITO ET AL.

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/2/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Ex parte Quayle

1. This application is in condition for allowance except for the following formal matters:

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: C10, R25 through R29 (Figure 5), VppZ, VppZ' (Figure 6), lac0 (Figure 7), 102-1, 102-2, 102-3, 103-1, 103-2, 103-3, 104-1, 104-2, 104-3, 105-1, 105-2, 105-3, 106-1, 106-2, 106-3 (Figure 9), T7, T14, and T15 (Figure 18). Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the

description: Tt (page 36, line 14), Tw (page 36, line 17), 260 (page 44, line 1, etc.), and 261 (page 44, line 7, etc.). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because of the following informalities:

- a. Figure 10, "TRANSPART" should be "TRANSPORT".
- b. Figure 14, "43a", "43b", and "43c" should be "243a", "243b", and "243c", respectively.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The

replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because of the following informalities:

- a. Reference character "A" has been used to designate both "a direction" (page 26, line 19 and Figure 5) and "a graph" (page 28, line 14 and Figure 6).
- b. Reference character "B" has been used to designate both "a direction" (page 26, line 20 and Figure 5) and "a graph" (page 28, line 15 and Figure 6).

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

7. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

8. The disclosure is objected to because of the following informalities:

- a. Page 22, line 7, "118and" should be "118 and".
- b. Page 43, line 15, "280" should be "230".

Appropriate correction is required.

Claims

9. Claims 6, 8, 12, 14, and 21 contain the following minor informalities:

- a. Claim 6, line 3, "the non-image" should be "a non-image".
- b. Claim 8, line 18, "the" (second occurrence) should be "a".
- c. Claim 12, line 3, "the non-image" should be "a non-image".
- d. Claim 14, line 18, "the" (second occurrence) should be "a".
- e. Claim 21, line 3, "the non-image" should be "a non-image".

Appropriate correction is required.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Allowable Subject Matter

10. Claims 1-22 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach or suggest an image forming apparatus comprising: a first AC charge voltage is applied to the image carrier when the transport interval of the plural recording materials is shorter than a predetermined time, a second AC charge voltage is applied to the image carrier when the transport interval is longer than the predetermined time, and the second AC charge voltage is lower than the first AC charge voltage (claim 1); a first AC charge voltage is applied to the image carrier when the duplex transport unit is not transporting the recording material, a second AC charge voltage is applied to the image carrier when the transport unit is transporting the recording material, and the second AC charge voltage is lower than the first AC charge voltage (claim 8); and a first AC charge voltage is applied to the image carrier when the duplex transport unit is not transporting the recording material, a second AC charge voltage is applied to the image carrier when the transport unit is transporting the recording material and the feeder unit is feeding the recording material subsequent to the recording material based on the image formation conditions stored in the memory unit, and the second AC charge voltage is lower than the first AC charge voltage (claim 14).

Citation of Pertinent Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ohzeki et al. (U.S. Pat. No. 5,450,180) discloses an image forming apparatus comprising an image carrier; a charging unit; a charge voltage loading unit; and a control unit for controlling AC charge voltage applied by the charge voltage loading unit to the charging unit.

Takami et al. (U.S. Pat. Pub. No. US 2002/0006289 A1) discloses an image forming apparatus comprising an image carrier; a charging unit; a charge voltage loading unit; a control unit for controlling AC charge voltage applied by the charge voltage loading unit to the charging unit; and a current detection unit.


Tsuruya et al. (U.S. Pat. Pub. No. US 2002/0159782 A1) discloses an image forming apparatus comprising an image carrier; a charging unit; a charge voltage loading unit; and a control unit for controlling AC charge voltage applied by the charge voltage loading unit to the charging unit.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
June 15, 2004